

**AB** The present invention relates to novel epoxides having the formulas I, II, and III, where Y is a CO, CO<sub>2</sub> or SO<sub>2</sub>, AR is the same or different divalent unsubstituted or substituted aromatic, halogen-substituted aromatic or cyano-substituted aromatic hydrocarbon radical having from 6 to 20 carbon atoms, Z is a divalent hydrocarbon or ether radical having from 1 to 20 carbon atoms, including Y-Z-Y being CO, and R is an alkyl, aryl, arylalkyl, alkoxy, aryloxy or arylalkoxy radical having from 0-20 carbon atoms. Thus, 1,3-benzenedisulfonic acid bis[2-(2,3-epoxypropyl)]phenyl ester was synthesized by epoxidizing 1,3-benzenedisulfonic acid bis-(2-allyl)phenyl ester (prepared from 1,3-benzenedisulfonic acid bis-(2-allyl)phenyl ester 2-allylphenol) with 3-chloroperbenzoic acid.

**IC** ICM C07D047-10

**INCL** 549549000

**CC** 35-2 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 28

**IT** 13827-62-8P, 2,6-Naphthalenedisulfonic acid bis[2-(2,3-epoxypropyl)]phenyl ester 102553-66-2P, Bis-1,2-[2-(2,3-epoxypropyl)phenoxy]ethane 470668-78-1P, 2,5-Dimethyl-1,3-benzenedisulfonic acid bis[2-(2,3-epoxypropyl)]phenyl ester 470668-79-2P, 1,3-Benzenedisulfonic acid bis[2-(2,3-epoxypropyl)]phenyl ester 470668-80-5P 470668-81-6P 470668-83-8P, Bis-1,4-[2-(2,3-epoxypropyl)phenoxy]butane 470668-84-9P, Bis[2-(2,3-epoxypropyl)phenyl]phenyl phosphate 470668-85-0P 470668-86-1P, 3,6-Bis[2-(2,3-epoxypropyl)phenoxy]pyridazine  
**470668-87-2P**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of novel epoxide derivs. of allylarylphe nols for manufacture of epoxy resins)

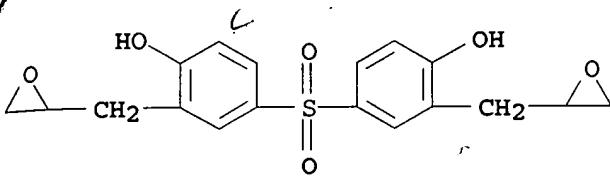
**IT** **470668-87-2P**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis of novel epoxide derivs. of allylarylphe nols for manufacture of epoxy resins)

**RN** 470668-87-2 HCAPLUS

**CN** Phenol, 4,4'-sulfonylbis[2-(oxiranylmethyl)- (9CI) (CA INDEX NAME)



L16 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:585467 HCAPLUS

DN 138:56103

TI Lewis acid mediated control of allylic epoxide opening in carbocyclization and halide addition pathways

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SO Tetrahedron (2002), 58(32), 6397-6404

CODEN: TETRAB; ISSN: 0040-4020

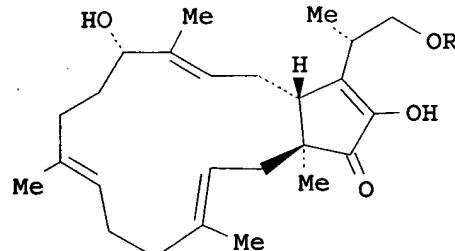
PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 138:56103

GI



I

AB Various novel carbocyclization processes were observed to occur in Lewis acid-mediated cyclizations of an allylic epoxide substrate with a tethered enol(ate) function as nucleophile. Both cation-olefin polycyclization pathways and SN-prime macrocyclization processes were observed to occur in the presence of different Lewis acid additives. Lewis acid additives were also observed to direct the stereochem. of allylic epoxide opening by SN-prime addition of halide ions. This provided a route to the corresponding E- or Z-allylic halides, which served as substrates in an alternative, successful approach to the terpestacin (I; R = H)/fusaproliferin (I; R = Ac) ring system by a subsequent alkylative macrocyclization reaction.

CC 30-25 (Terpenes and Terpenoids)

IT 429621-27-2P 479035-99-9P 479036-00-5P 479036-02-7P 479036-04-9P  
479036-06-1P 479036-09-4P 479036-10-7P 479036-11-8PRL: SPN (Synthetic preparation); PREP (Preparation)  
(intramol. allylic epoxide-enol(ate) carbocyclization/halide addition processes in presence of Lewis acid activators for macrocyclization pathway to terpestacin/fusaproliferin ring systems)

IT 479036-11-8P

RL: SPN (Synthetic preparation); PREP (Preparation)